

RECEIVED
CENTRAL FAX CENTER

JUN 12 2008

REMARKS

With respect to the Drawing Objection:

Regarding the objection of "the image capturing unit (35) directly captures the diffracted images," a new drawing, Fig 10, is added to show a CCD sensor array as the image capturing unit (35) for capturing the diffracted images without a screen.

With respect to the Specification Objection:

Regarding the objected Specification, the objections are revised and obviated by the above Specification Amendment.

With respect to the Claim Objection:

Regarding the claim objection, the objected claims are amended and obviated by the above claim amendment.

With respect to the claim rejections under 35 U.S.C. 112 – first and second Paragraphs:

The ground rejection of claims 1 to 10 under 35 U.S.C. 112, first paragraph and second paragraph are obviated by the above Specification and Claim Amendments.

A core concept of the present invention is that the pressure variations of the blood sample through a micro-channel is only a function of time elapse, if a blood sample test is performed under a specified condition of setting initial pressure and selecting a specific size

of micro-channel, because the viscosity of the buffered blood sample, which is diluted with a plenty amount of the buffering solution larger than amount of the blood sample is approached to almost same as that of the buffering solution. This fact has discovered through the tremendous experiments. The empirical data are determined and stored in the computer for various tests performed with specified initial pressure and specific size of the micro-channel.

Therefore, it is possible to conveniently determine the blood cell deformability by simply measuring the time elapse, if a sample blood test is performed by setting a specified initial pressure and selecting a specific size of the micro-channel. Accordingly, it is not necessary to measure the instant pressure, every time at each point. The blood cell deformability and shearing force is determined, when the input data, such as a setting of specific initial pressure, size of the micro-channel, and the time elapse is known.

Regarding the calculation of the blood cell deformability and shearing force, the above amended claim is clearly defined that: the blood cell deformability and shearing force are determined through a computer analyses on time based data of the captured images and pressure measurements, with or without applying instantly measured pressure data, and the diffracted images of the blood cells captured by the image-capturing unit (35) are analyzed by ellipse curve-fitting computer software to determine the length (L) and width (W) of the analyzed elliptic images, and calculating the Deformation Index (DI) for determining the blood cell deformability and shearing force as a function of time. (Specification on Page 11, lines 13 to Pages 14, line 3).

Regarding the comment of "omitting essential structural cooperative relationships of element, such omission amounting to a gap between the necessary structural connections," the examiner seems to misunderstanding the instant invention. The light emitting unit (10) illuminates the laser beams on the blood sample to project the images on the screen (or the retina in the image capturing unit (35)). Then, the diffracted images on the screen (or the

RECEIVED^{P. 11}
CENTRAL FAX CENTER
JUN 12 2008

retina) is measured and calculated by the control unit (36).

Therefore, there are no omitting essential structures between the necessary structural connections in the instant invention.

Regarding rejection of the image capturing unit (35) for capturing the diffracted images without the screen, a CCD sensor array is adopted as the image capturing unit (35), which is capable to directly capture the diffracted images without a screen.

Regarding rejection of "could use" either a CCD sensor array, CCD camera, digital camera, web camera or video camera, it is amended to "can be adopted," as shown in the above claim amendment.

Regarding the rejection of claims 1 to 10 of the first paragraph, the specification is revised and obviated by the above Specification Amendment.

Therefore, the applicant believes the present application is now in allowance condition and early Notice of Allowance is respectively solicited.

Respectfully submitted



Peter T. Kwon
Registration No. 45,300

GWIPS
Global Wide International Patent Service
Gwacheon P. O. Box, 72
Gyeonggi-Do 427-600
Republic of Korea
Tel: 82-10-9174-5959
Fax: 82-31-427-3959
e-mail: taijunkwon@yahoo.com

GWIPS